

**REMARKS**

Claims 1-10 are pending in this application. By this Amendment, claims 1-8 are amended. Reconsideration in view of the above amendments and following remarks is respectfully requested.

**I. Claim 1 Satisfies All Formal Requirements**

Claim 1 is objected to for informalities. Specifically, claim 1 is objected to because "third component gas" lacks antecedent basis. Accordingly, claim 1 is amended to recite "third body gas". The function of the third component gas is discussed in the specification, for example, at page 3, paragraph 5. Further, discussion of third body gas is discussed in the information submitted in the Information Disclosure Statement.

**II. The Claims Define Patentable Subject Matter**

Claims 1-10 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,566,652 to Kato in view of U.S. Patent No. 6,008,490 to Kato and further in view of U.S. Patent No. 5,194,739 to Sato. These rejections are respectfully traversed.

None of the applied art teaches, discloses or suggests ion attachment mass spectrometry for attaching positively charged metal ion emitted from an ion emitter to a gas to be detected, as claimed in claim 1 and similarly claimed in claims 2-8.

Instead, Kato relates to a different mass spectrometry technology which is different from the ion attachment mass spectrometry. That is, Kato discloses an atmospheric pressure ionization mass spectrometry apparatus in which the internal chamber of an ion source is not contaminated by ambient air, by automatically providing gas such as nitrogen to the ion source. In Kato, the mass spectrometry has no ion emitter 18 in the ion source.

Similarly, Sato relates to a technology different from the present invention. Sato relates to a technology of the mass spectrometry based on a liquid metal ion source.

According to the present invention, the mass spectrometry uses the ion attachment when ionizing the gas to be measured. Ions attached to the gas to be measured are emitted from the ion emitter in the ionization chamber.


One object of the present invention is to limit the generation of the interference peak when detecting a low concentration gas to be detected by using the ion attachment mass spectrometry. Accordingly, the third embodiment gas or the material of the ion emitter is suitably selected or changed. None of the applied art teaches, discloses or even suggests the features recited in the independent claims or the advantages provided thereof. Withdrawal of the rejection of the claims under 35 U.S.C. §103 is respectfully requested.

### **III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

  
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Attachments:

Petition for Extension of Time  
Information Disclosure Statement

Date: October 6, 2003

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